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Attn: Examiner Binh Kien Tieu
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FROM: Victor G. Cooper
OUR REF.: PD-00-385
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Title of Document Transmitted:	TRANSMITTALS AND REPLY BRIEF OF APPELLANTS
Applicant:	Stephen F. Sichi et al.
Serial No.:	09/972,107
Filed:	October 5, 2001
Group Art Unit:	2614
Title:	SATELLITE TRANSPONDER ARCHITECTURE WITH INTEGRAL REDUNDANCY AND BEAM SELECTION CAPABILITIES
Our Ref. No.:	PD-00-385

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Name: Victor G. Cooper
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Stephen F. Sichi et al.	Examiner:	Binh Kien Tieu
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Filed:	October 5, 2001	Docket:	PD-00-385
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Name: Victor G. Cooper

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Dear Sir:

We are transmitting herewith the attached:

- ☒ Transmittal sheet, in duplicate, containing a Certificate of Mailing or Transmission under 37 CFR 1.8.
- ☒ Reply Brief of Appellant(s).

Please consider this a **PETITION FOR EXTENSION OF TIME** for a sufficient number of months to enter these papers, if appropriate.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Inventor: Stephen F. Sichi et al.

Serial #: 09/972,107

Filed: October 5, 2001

Title: SATELLITE TRANSPONDER
ARCHITECTURE WITH INTEGRAL
REDUNDANCY AND BEAM SELECTION
CAPABILITIES

Examiner: Binh Kien Tieu

Group Art Unit: 2643

Appeal No.: _____

REPLY BRIEF OF APPELLANTS

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 C.F.R. §41.41, Appellants hereby submit their Reply Brief on Appeal from the final rejection of claims of the above-identified application, and as set forth in the Answer mailed October 26, 2006.

No fee is required for filing this Reply Brief. However, the Office is authorized to charge any necessary fees or credit any overpayments to the assignee of the present application.

I. ARGUMENTS

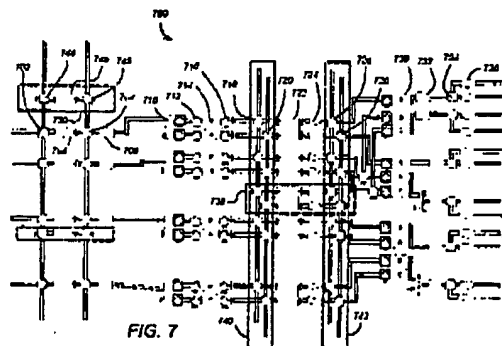
A. Claims 1-3, 5-15, and 17-26 are Patentable over the Collar Reference

In their Appeal Brief, the Applicants noted that the Collar reference disclosed “a rather traditional dual rail switching network, not the single rail network with the connectivity described in claim 1.”

The Answer responds:

The Examiner respectfully disagrees with the Appellants’ arguments stated above. According to the Specification, page 7, discloses the “dual rail” as “...The channel filter 714 output is provided to a first rail 718 of a TWTA redundancy ring. The redundancy ring also comprises a second rail 720. The dual rail redundancy ring is used to assure that a complete failure of the elements within the ring (in this example, the dual driver power conditioners or dual drive amplifier 722” can be ameliorated by having to switch only one failed TWTA per ring..” (Emphasis added). It is clearly to understand that the “dual rail” is two rails with the same elements or duplicated to each other’s, e.g., having the dual driver power, dual driver amplifier, etc. Therefore, the Appellants argued that the rings 7 and 8 in figure 3 of the Collar reference as “dual ring or “dual rail” are incorrectly because rings 7 and 8 having structure as well as elements are different. They cannot perform as a dual rail redundancy ring for (function of) using to assure that a complete failure of the elements within the ring. Thus, the ring 8 is a single output switching ring or single output rail switching network, and the ring 7 of switches is just intermediate switches, which is not composited as a redundancy ring or rail.

The Applicants respectfully disagree. The Applicant’s specification illustrates a typical use put to a dual rail. The above text refers to FIG. 7 (reproduced below) which shows an exemplary rail as a parallel arrangement of switches. A dual rail would then be two rails, as is also shown in FIG. 7.



A single element of a dual rail system is disclosed in FIG. 2 as well, wherein a parallel arrangement of switches 204 together comprise the first rail and a parallel arrangement of switches 206 together comprise the second rail.

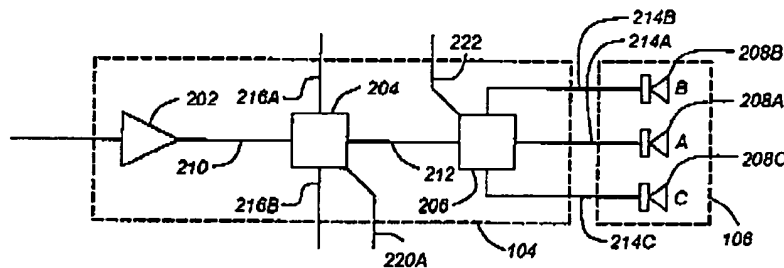


FIG. 2
PRIOR ART

The

The Answer goes astray when it attempts to redefine the notion of “rails” to include what might or might not lie between them or what they might be used to do:

It is clearly to understand that the “dual rail” is two rails *with the same elements or duplicated to each other’s, e.g., having the dual driver power, dual driver amplifier, etc.* Therefore, the Appellants argued that the rings 7 and 8 in figure 3 of the Collar reference as “dual ring or “dual rail” are incorrectly because rings 7 and 8 having structure as well as elements are different. (Emphasis added)

Dual rails are dual rails, whether they are used for redundancy or not. That the Collar reference does not explicitly show amplifiers between the rails does not mean that it does not disclose a dual rail structure.¹

The Examiner’s Answer also failed to address the other substantive issue raised by the Applicants ... that beyond the dual rail structure, the Collar reference also fails to disclose the specific interconnecting of switches in the single rail as recited in claim 1. Specifically:

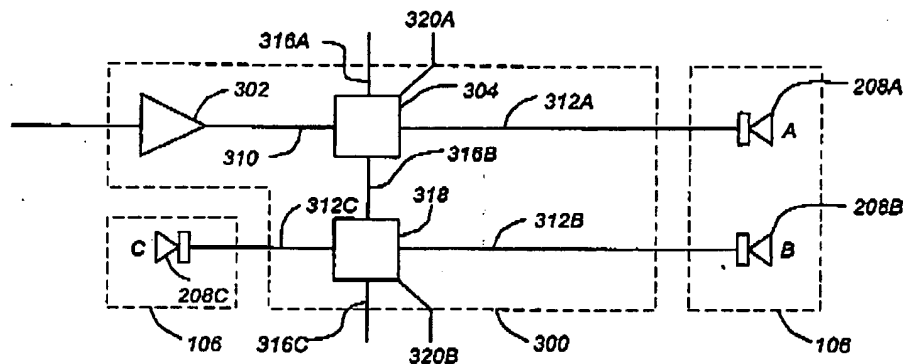
The foregoing also does not disclose a structure with a first switch selectably coupling one of the amplifiers to one of a plurality of antennae in a first state and a second switch in a second state along wherein the second output switch is selectably coupled to a

¹ Although the Collar reference indeed does appear to use the dual rail structure for redundancy purposes (col. 2, lines 7-16).

second one of the plurality of antennae in a first switch state and a third one of the plurality of antennae in the second switch state.

Switches 7^{1-7²⁸} select between switches 8^{1-8²⁸} (which now read as 6^{1-6²⁸} in order for the Applicant to modify FIG. 3 as required) respectively, not a one of a plurality of antennae. Only switches 8^{1-8²⁸} switch between a second switch (e.g. the switch above or below it) and an antenna (the output). Claim 1 then requires that one of these switches is coupled to a *second one of the plurality of antennae* when in a first state and a *third one of the plurality of antennae* when in a second switch state. Switches 6^{1-6²⁸} clearly do not provide this arrangement. If the Applicants are incorrect about this, they would appreciate the guidance as to which switches must be in which position for the above structure to read on claim 1. As far as the Applicants can tell, no combination of switch positions can provide a structure that reads on the Applicants' claims.

This structure is illustrated in FIG. 3 of the Applicants' disclosure and is plainly not disclosed by "ring 8" of the Collar reference.



B. With Respect to Claims 18, 19, and 24

In their Appeal Brief, the Applicants noted that

Claim 18 recites the step of selectably coupling the signal to a first output device or a second switch via a first switch according to a first switch selection. The Collar reference discloses a system in which the signal (presumably from one of the amplifiers) is selectably coupled to a second switch (in the adjacent rail) or a third switch (in the same rail) according to the first switch selection. Further, the Collar reference discloses selectably coupling the signal from the first switch to yet another switch (not an output device). Accordingly, the Applicants respectfully traverse.

The Answer responded:

The Examiner respectfully disagrees with the appellants' arguments as stated above. First of all, the phrases "*a first output or a second switch*" having the Boolean "or" in

between. It means that the input signal is coupled to one of first output and second switch should meet the limitation of the claim. Therefore, Collar *reference discloses selectively coupling the signal from the first switch to yet another switch* (not necessary to couple to an output device because of Boolean "or"), which meet the limitation of the claim. Second, the nature of the switches are clearly disclosed in figure 4, column 3, lines 13-59. Therefore, it is believed that the example described in column 3, lines 46-53 teaches limitations of "...coupling the signal from the first switch to an output device, e.g., the second TWTA (redundant)."

Here, the Answer errors by analyzing the Applicants argument instead of claim 18 itself.

Claim 18 recites:

*A method of providing a signal to any one of a plurality of output devices, comprising the steps of:
receiving the signal in a first switch;
selectably coupling the signal to a first output device or a second switch via a first switch according to a first switch selection; and
selectably coupling the signal from the first switch to a second output device or a third output device if the signal is not coupled to the first output device via the second switch according to a second switch selection.*

The foregoing recites more than simply a "first output or a second switch." It recites "selectably coupling the first signal to a first output device or a second switch via a first switch." The Answer's argument ("not necessary to couple to an output device because of Boolean "or") is incorrect, because claim 1 recites the step of selectably coupling between the first output or a second switch ... not merely a first switch or a second switch. Simply put, Collar does not disclose selectably coupling the signal to a first output device or a second switch via a first switch according to a first switch selection.

C. With Respect to Claims 18 and 20

In their reply brief, the Applicants noted:

Claim 18 was also rejected under Vannatta. The Final Office Action argues that the step of selectably connecting the received signal a first output device or a second switch via a first switch is disclosed by "selecting connecting the received signal to either the speakerphone 178 or the sensor 199." However, the switch 121 operates to couple either antenna 112 or antenna 120 to switch 130. It does not provide the signal from 112 to either an output device or a switch, as recited in claim 18.

The Answer again responds by ignoring the "selectably coupling" feature recited in claim 18.

The appellants, again, are reminded that claims 18 and 20 each recited the Boolean "or" in the phrase of "*a first output or a second switch*" as discussed above. Therefore, Vannatta reference discloses the switch 121 operates to couple either antenna 112 or antenna 120 to switch 130. It is not necessary to provide the signal from 112 to either an output device or a switch in order to meet the limitation as recited in claim 18 because it recited the Boolean "or".

For the reasons described above, the Applicants disagree. Further, as the Applicants noted in their Appeal Brief,

... the input signal (of Vanetta) is never connected to an output device at all. Instead, it is provided to receiver circuitry 166, processor 198, and transmitter circuitry 190, where it is substantially processed, and an entirely different signal is provided to the output devices. Connecting a speaker 178 to the signal from the antenna 112 would provide nothing but silence.

II. CONCLUSION

In light of the above arguments, Appellant respectfully submit that the cited references do not anticipate nor render obvious the claimed invention. More specifically, Appellant's claims recite novel physical features which patentably distinguish over any and all references under 35 U.S.C. §§ 102 and 103. As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

Respectfully submitted,

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